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Chen

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(54) **METHOD AND SYSTEM FOR
PROGRAMMING A PERIPHERAL FLASH
MEMORY VIA AN IDE BUS**

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(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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710/129; 712/39; 712/43; 712/229; 713/100;
717/168; 717/173; 717/174; 717/178**

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(57) **ABSTRACT**

A system for programming a periphery flash ROM is provided. The system includes a host computer, an IDE interface, a flash controller, a flash ROM, and a microprocessor. The flash controller is coupled to the host computer through the IDE interface. The flash ROM and the microprocessor are also coupled to the flash controller. When the system enters a flash ROM programming mode, task files used between the IDE interface and the host computer are redefined by the host computer and is interpreted by the flash controller so that a firmware code from the host computer is written into the flash ROM through the flash controller. After the flash ROM is completely programmed, the task files return to their original definition. The microprocessor is required to disable the access to the flash ROM during the flash ROM programming mode. If several flash ROM programming cycles are needed in one host request, the firmware can be temporarily stored into a buffer, such as a RAM and then sequentially written into the flash ROM through the flash controller. Since the software method may occupy too much time of the IDE interface, resulting in a delay for the other subsequent activities, the hardware method may be a better way to update the firmware code, particularly to a large firmware code.

18 Claims, 2 Drawing Sheets

